

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 18-34 are pending in the present application. Claims 18-27, 29, 31, 33, and 34 are amended by the present amendment.

In the outstanding Office Action, Claims 18-34 were objected to; Claims 23-26 and 34 were rejected under 35 U.S.C. § 112, second paragraph; Claims 18-21 and 33-34 were rejected under 35 U.S.C. § 103(a) as unpatentable over Maurice (International Publication WO 91/10234) in view of Kumio (Japanese Application No. 63-202289); Claims 22 and 29-32 were rejected under 35 U.S.C. § 103(a) as unpatentable over Maurice, Kumio, and Strand (U.S. Patent No. 4,660,175); and Claims 27-28 are indicated as allowable if rewritten in independent form.

Applicant thanks the Examiner for the early indication of allowable subject matter and acknowledges with appreciation the courtesy of an interview extended to Applicant's representative on July 30, 2003. During the interview differences between the claims and the applied art were discussed. Further, proposed claim amendments clarifying the claims over the applied art were discussed. The present response sets forth those discussed proposed claim amendments.

As required by the Examiner during the interview, filed concurrently herewith are formal Figures 4a and 4b labeled "BACKGROUND ART," and the specification is amended to include section titles that better conform with U.S. PTO suggested titles. No new matter has been added.

Regarding the objection to Claims 18-34, Claims 18, 27, 31, and 33 are amended to recite "a predetermined magnetic permeability" instead of "a good magnetic permeability," as

discussed during the interview. No new matter has been added. Accordingly, it is respectfully requested that this objection be withdrawn.

Regarding the rejection of Claims 23-26 and 34 under 35 U.S.C. § 112, second paragraph, Claims 23-25 are amended to recite “a total thickness” instead of “a thickness,” and Claims 25 and 26 are amended to recite a specific number of layers and a specific total thickness of those layers instead of “a few tens.” Further, Claim 34 is amended to more clearly recite that “a thickness of the backplate is substantially equal to a thickness of the substrate.” These claim amendments find support in the originally filed specification at least at page 7, lines 4-13. No new matter has been added. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 18-21 and 33-34 were rejected under 35 U.S.C. § 103(a) as unpatentable over Maurice in view of Kumio. That rejection is respectfully traversed.

Independent Claim 18 is amended to more clearly recite a first plurality of sublayers, a second plurality of sublayers, sublayers of the first plurality alternate with sublayers of the second plurality, and a layer with a predetermined magnetic permeability. No new matter has been added. The claim amendments find support in the originally filed specification at least at page 9, lines 30-34, and in Figure 5.

Amended independent Claim 18 is directed to a magnetooptic read head having at least one thin magnetic layer with a magnetooptic effect, at least one layer of a nonmagnetic material, and a layer with a predetermined magnetic permeability that is configured to close a magnetic circuit. The at least one layer of the nonmagnetic material has a predetermined wear coefficient greater than a wear coefficient of a multilayer structure including the at least one thin magnetic layer with the magnetooptic effect. Further, the layer with the predetermined magnetic permeability has a first plurality of sublayers made of a magnetic

material and a second plurality of sublayers made of a material having a wear coefficient substantially equivalent to the wear coefficient of the at least one layer of the nonmagnetic material. Furthermore, sublayers of the first plurality of sublayers alternate with sublayers of the second plurality of sublayers.

In a non-limiting example, Figure 5 shows the at least one thin magnetic layer 11 with the magnetooptic effect, the at least one layer 10 of the nonmagnetic material having a predetermined wear coefficient, and the layer 9 with the predetermined magnetic permeability that closes a magnetic circuit. Further, Figure 5 shows the first plurality of sublayers 92 and 94, and the second plurality of sublayers 91 and 93 made of a material having a wear coefficient substantially equivalent to the wear coefficient of the at least one layer of the nonmagnetic material. Sublayers 92 and 94 of the first plurality of sublayers alternate with sublayers 91 and 93 of the second plurality of sublayers.

As shown in Figure 4a, a problem of a background art magnetooptic read head is the faster wearing of a layer 9 with a predetermined magnetic permeability relative to a wearing of a thin magnetic layer 11 with a magnetooptic effect. The magnetooptic read head of Claim 18 solves this problem because the second plurality of sublayers of the layer with the predetermined magnetic permeability is made of a material having a wear coefficient substantially equivalent to the wear coefficient of the at least one layer of the nonmagnetic material.¹

Maurice discloses in Figure 2 a thin magnetic layer 11 with a magnetooptic effect, a layer 10 of a nonmagnetic material, and a layer 9 with a high magnetic permeability that closes a magnetic circuit.² As recognized in the outstanding Office Action, at page 3, item 6, the layer 9 that closes the magnetic circuit in Maurice is not multilayered. In addition,

¹ Specification, page 7, lines 15-39.

² Maurice, Abstract.

Maurice does not teach or suggest (i) at least one layer of a nonmagnetic material having a *predetermined wear coefficient greater than a wear coefficient of a multilayer structure*, and (ii) a second plurality of sublayers made of a material having *a wear coefficient substantially equivalent to a wear coefficient* of at least one layer of the nonmagnetic material.

The outstanding Office Action relies on Kumio for teaching a magnetic head core with a first plurality of magnetic layers 2 disposed among a second plurality of nonmagnetic layers 3. Further, Kumio shows in Figure 1 the magnetic layers 2 and the nonmagnetic layers 3 formed on a substrate 1. However, as discussed during the interview, Kumio does not teach or suggest (i) magnetic layers 2 configured to close a magnetic circuit, (ii) at least one layer of a nonmagnetic material having a predetermined wear coefficient greater than a wear coefficient of a multilayer structure, (iii) and a second plurality of sublayers made of a material having a wear coefficient substantially equivalent to a wear coefficient of the at least one layer of a nonmagnetic material.

In addition, as further discussed during the interview, one skilled in the art would not have substituted layer 9 for closing a magnetic circuit in Maurice with a magnetooptic layer 2 in Kumio to achieve a better wear coefficient because the magnetooptic layer 2 in Kumio corresponds to a magnetooptic layer 11 and not to the layer 9 in Maurice. Therefore, it is respectfully submitted that there is no motivation or suggestion to combine Maurice with Kumio in the manner discussed above.

Accordingly, it is respectfully submitted independent Claim 18 and each of the claims depending therefrom patentably distinguish over Maurice and Kumio.

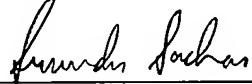
Claims 22 and 29-32 were rejected under 35 U.S.C. § 103(a) as unpatentable over Maurice, Kumio, and Strand. That rejection is respectfully traversed.

Strand is asserted for teaching a silicon nitride in a data storage medium as a nonmagnetic layer and an optical coupler. However, Strand does not overcome the deficiencies of Maurice and Kumio discussed above. Accordingly, it is respectfully submitted that Claims 22 and 29-32, which depend directly or indirectly on independent Claim 18, are also allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorneys of Record

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
GJM/SS/RFF/cja

I:\ATTY\RFF\21S\219604\219604US-AM.DOC